Work Order ID 56572

Monday, March 01, 2010 2:58:53 PM

Item ID: D6014-090 **Accept** **Setup Start** **Stop**

Revision ID:

Item Name: ALUMINUM EXTRUSION 28CL

Start Date: 3/2/2010 **Start Qty:** ~~40.00~~

Required Date: 3/15/2010 **Req'd Qty:** ~~40.00~~

Reference:

Cust Item ID:

Customer:

Run Start **Stop**

Approvals: **Process Plan:** MF **Date:** 10-3-1 **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	**Revision Nbr**								
D6014	Rev A								

100 PURCHASING 0.00

Purchasing

Purchasing

Memo 0.00

Issue P/O: 11449 □a) Extrude as per Dwg D6014□b) Material: 7075-T73/T73510/T73511 (QQ-A-200/11)Seamless Aluminum Tube□c) Minimum ultimate tensile strength = 68 ksi□d) Minimum tensile yield strength = 57 ksi□Possible Supplier: Aluminum Works□Mater

CL 10/3/2 ~~40~~ 28

110 Receive & Inspect for Damage & Mat'l Certs 0.00

Packaging

Packaging

Memo 0.00

Ensure material certification is attached

10/6/4 29

120 QC6- Inspect dimensions to drawing 0.00

QC

Quality Control

Memo 0.00

Ensure Material certification comply to Dwg D6006

Satisfactory

COMPLETED 29

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

Work Order ID 56572

Monday, March 01, 2010 2:58:53 PM

Item ID: D6014-090 **Accept** **Setup Start** **Stop**

Revision ID:

Item Name: ALUMINUM EXTRUSION

Start Date: 3/2/2010 **Start Qty:** 40.00 **Cust Item ID:**

Required Date: 3/15/2010 **Req'd Qty:** 40.00 **Customer:**

Reference:

Run Start **Stop**

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Chemical Conversion Coat per QSI005 4.1	0.00							
HandFinish	**Memo**	0.00							
Hand Finishing									
140	QC3- Inspect Part Finish	0.00							
QC	**Memo**	0.00							
Quality Control									
150	Identify as per dwg & Stock Location: 4/6	0.00							
Packaging	**Memo**	0.00							
Packaging									

N/A

N/A

DP 10-6-7 29

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

Picklist Print

Monday, March 01, 2010 2:58:53 PM

Work Order ID: 56572

Parent Item: D6014-090

Parent Item Name: ALUMINUM EXTRUSION

Start Date: 3/2/2010 **Required Date:** 3/15/2010

Comments: IPP A□05.08.31□New issue□KJ/JLM□ **Start Qty:** 40.00 **Required Qty:** 40.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D6014-090P ALUMINUM EXTRUSION		Purchased	No			110	Each	0.0000	~~40.0000~~ 28			

10/6/09 (29)

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

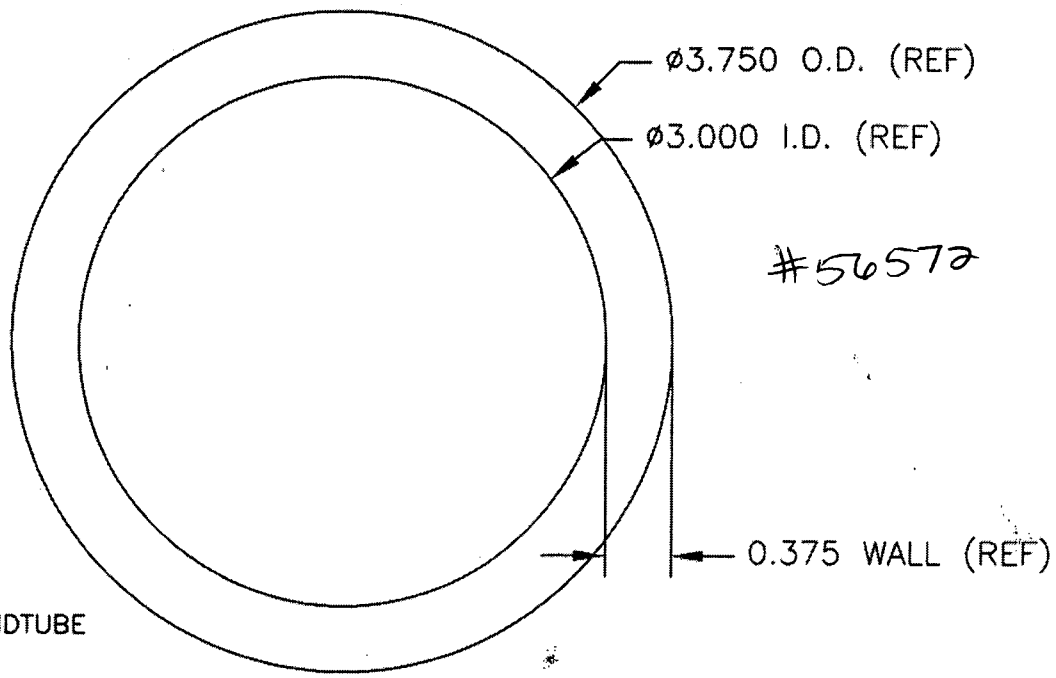
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

DESIGN	DRAWN BY	DART AEROSPACE USA, INC. PORT HADLOCK, WA
PH	PH	
CHECKED	APPROVED	DRAWING NO. D6014 REV. A SHEET 1 OF 1
DATE 05.03.18		TITLE SKIDTUBE MATERIAL SCALE 1:1
A	05.03.18	NEW ISSUE

RELEASED
05.08.09

SPECIFICATION CONTROL DRAWING



#56572

NOTES

1) D6014–XXX SKIDTUBE
LENGTH

WHERE XXX IS LENGTH IN INCHES
EG. 64" LONG TUBE: D6014–064

2) MATERIAL: 3.750 OD x 0.375 WALL 7075–T73/T73510/T73511 PER QQ–A–200/11
SEAMLESS ALUMINUM TUBE.
MINIMUM ULTIMATE TENSILE STRENGTH = 68 ksi
MINIMUM YIELD TENSILE STRENGTH = 57 ksi

3) TOLERANCES ARE PER ASTM B210 AS FOLLOWS:
O.D.: ± 0.008 MEAN (±0.016 INCLUDING OVALITY)
WALL: ±0.015 MEAN (±0.038 INCLUDING ECCENTRICITY)
LENGTH: XXX +0.188/–0.000
STRAIGHTNESS: 0.010" DEVIATION / 12" LENGTH

4) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.

5) CHEMICAL CONVERSION COAT PER DART QSI 005 4.1

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

Packinglist ALUnna AG

ALUnna ref. no.	35783/1
Customer PO.	P.O.11449
Date:	05.12.10

Boxmarking:

Dart Aerospace P.O.11449
D6014-090 Made in Germany
Dest hawkesbury Ont Canada

We hereby declare that the wooden packing material are totally free from bark and apparently free from live plant pests

										Boxdimension								
Item no.	Box no.	OD (inch)	ID (inch)	Wall (inch)	Net Weight (lbs)	Tare lbs	Gross Weight	Pieces	lengths (ft)	Lengths (inch)	Width (inch)	height (inch)	Cast. / Heat No. Top	Pcs.	Cast. / Heat No. Middle	Pcs.	Cast. / Heat No. Bottom	Pcs.
1	1	3,750	3,000	0,375	727	242	970	20	8	151,575	22,441	22,441			3370/400402	20		
1	2	3,750	3,000	0,375	326	245	571	9	8	151,575	22,441	22,441			3370/400402	9		
					1054	487	1541	29										

ALUnna

Abnahmeprüfzeugnis 3.1 - DIN EN 10204:2005

Inspection Certificate 3.1 - DIN EN 10204:2005 / Certificat de Reception 3.1- DIN EN 10204:2005

Kunde: *Client:* Dart Aerospace Ltd.

1270 Aberdeen Street
K6A1K7 Hawkesbury, ON Canada

Zeugnisnummer: *Cert No.: / No. du certificat:* 670/10

Bestellnummer: *Order No. / No. de commande* PO11449

Auftrag: 35783/1

Our Reference/Notre Ref.:

Produkt: *Product / Produit:* Rohre nahtlos gepresst *Tubes seamless extruded* *Tubes file sur aiguille*

Spezifikation: *Specification:* -; AMS - QQ - A - 200/11E; -; -; Spezifikation Dart Aerospace D6014

Werkstoff: *Alloy/Alliage:* EN AW-7075 3.4365

Zustand: *Temper/État* T 73511

Abmessung *Size / Dimension* 3,750 INCH x 3,000 INCH x 0,375 INCH x 90,000 INCH
D6014-090 3.750 X 0.375 X 90

Kennzeichnung *Marking/Marquage:* ALUnna-Cert No.670/10-7075-T73511-Cast No.3370-Ams-QQ-A-200/11-3.750" Od X 0.375" Wall-Heat lot No.400402-Alunna Order Conf No.35783/1-1-P.O.11449

Lieferung: *Delivered Material / Matérial délivre:*

Stück/pcs.	kg/kgs
29	478,00

1. Chemische Analyse / Chemical Analysis / analyse chimique

Charge/ Cast No.	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Zr	Bi	Sn	Ni
min.			1,2		2,1	0,18	5,1						
max.	0,40	0,50	2,0	0,30	2,9	0,28	6,1	0,20					
3370/09	0,128	0,247	1,412	0,074	2,412	0,200	5,738	0,046	0,003	0,0281	0,0001	0,0013	0,0050

Elemente ohne Angabe < 0,01 % / Elements without indication < 0,01 % Products are in accordance with applicable RoHS

2. Mechanische Eigenschaften / Mechanical Properties / Valeurs Mécaniques

Anforderungen Specification	Rm N/mm²	Rp0,2 N/mm²	A %	A 50 %	HB	Heat No.
min:	469	393				
max:						
1	536	469	68 ksi	10,0		400402 - 29 pcs.
2	533 → 77 ksi	471		10,0	OK	16.06.07

RMS outside 25 max. 16,1 µ"

Ergebnis der Prüfungen: Es wird bestätigt, daß die Lieferung geprüft wurde und den Vereinbarungen bei der Bestellannahme entspricht

Test results: We confirm that the delivery has been tested and applies to the agreements made on receipt of the order

Resultats: Nous confirmons que la livraison a été controlée et correspond avec les conventions faites à la réception de la commande

KrampeR
12.05.2010

ALUnna

Abnahmebeauftragter

$$469 \frac{N}{mm^2} \times \frac{25.4^2 in^2}{mm^2} \times \frac{2.205 lb}{1 kg} \times \frac{1}{9.81}$$